

WHAT IS CLAIMED IS:

1. A method for selecting transgenic plants comprising a silent selectable marker wherein said method comprises the steps of:
 - a) transforming plant root cells with a vector wherein said vector comprises a gene selected from the group consisting of an *ipt* gene, a *CKII* gene or a gene from the *knotted* family, wherein said gene is under the control of an inducible promoter;
 - b) growing said plant root cells to allow shoot development; and
 - c) excising shoots which develop from plants having a shooty phenotype, wherein said shoots can grow into normal transgenic plants when grown in the absence of said inducer.
2. The method of claim 1, wherein said plant root cell is a tobacco cell.
3. The method of claim 1, wherein said plant root cell is a lettuce cell.
4. The method of claim 1, wherein said plant root cell is an *Arabidopsis* cell.
5. The method of claim 1 wherein said vector further comprises one or more genes of interest.
6. The method of claim 1 wherein said vector further comprises an antibiotic resistance gene.
7. The method of claim 1 wherein said vector further comprises a herbicide resistance gene
8. The method of claim 1 which further comprises the step of:
 - (d) cultivating at least one of said shoots in the absence of said inducer to produce a transgenic plant.

9. The method of claim 6 wherein said shoots are further selected by growing said shoots in the presence of an antibiotic, said antibiotic being an antibiotic to which said antibiotic resistance gene confers resistance.
10. The method of claim 7 wherein said shoots are further selected by growing said shoots in the presence of a herbicide, said herbicide being a herbicide to which said herbicide resistance gene confers resistance.
11. The method of claim 1 wherein said vector comprises DNA encoding a regulatory region of a glucocorticoid receptor .
12. The method of claim 1 wherein said inducer is selected from the group consisting of dexamethasone, triamcinolone acetonide, betamethasone and hydrocortisone.
13. The method of claim 4 wherein IAA is present during step (b).
14. A vector comprising a chemically inducible promoter.
15. The vector of claim 14 wherein said vector comprises DNA encoding a regulatory domain of a glucocorticoid receptor or an estrogen receptor.
16. The vector of claim 14 wherein said vector comprises DNA encoding a regulatory domain of a glucocorticoid receptor and an estrogen receptor.
17. The vector of claim 14 wherein said vector comprises a gene encoding a selectable marker or a screenable marker.
18. The vector of claim 17 wherein said gene is *ipt*, *CKII*, *luciferase* or a member of the *knotted* family.
19. The vector of claim 17 wherein said vector further comprises a gene of interest.

20. The vector of claim 17 wherein said vector further comprises a gene for antibiotic resistance.
21. The vector of claim 17 wherein said vector further comprises a gene for herbicide resistance.
22. The vector of claim 15 wherein said vector comprises a CaMV 35S promoter, DNA encoding a DNA-binding domain of a GAL4 transcription factor, DNA encoding a herpes viral protein VP16 transactivating domain, and DNA encoding a regulatory region of a glucocorticoid receptor.
23. The vector of claim 22 wherein said vector comprises a GAL4 UAS.
24. The vector of claim 15 wherein said vector comprises DNA encoding a DNA binding domain of bacterial repressor *LexA*.
25. The vector of claim 24 wherein said DNA binding domain of bacterial repressor *LexA* is fused to a G1090 promoter.
26. A nucleic acid comprising a chemically inducible promoter.
27. The nucleic acid of claim 26 wherein said nucleic acid further comprises DNA encoding a regulatory domain of a glucocorticoid receptor or an estrogen receptor.
28. The nucleic acid of claim 26 wherein said nucleic acid further comprises DNA encoding a regulatory domain of a glucocorticoid receptor and an estrogen receptor.
29. The nucleic acid of claim 26 wherein said nucleic acid further comprises a gene encoding a selectable marker or a screenable marker.

30. The nucleic acid of claim 29 wherein said gene is *ipt*, *CKII*, *luciferase* or a member of the *knotted* family.
31. The nucleic acid of claim 29 wherein said nucleic acid further comprises a gene of interest.
32. The nucleic acid of claim 29 wherein said nucleic acid further comprises a gene for antibiotic resistance.
33. The nucleic acid of claim 29 wherein said nucleic acid further comprises a gene for herbicide resistance.
34. The nucleic acid of claim 27 wherein said nucleic acid comprises a CaMV 35S promoter, DNA encoding a DNA-binding domain of a GAL4 transcription factor, DNA encoding a herpes viral protein VP16 transactivating domain, and DNA encoding a regulatory region of a glucocorticoid receptor.
35. The nucleic acid of claim 34 wherein said vector further comprises a GAL4 UAS.
36. The nucleic acid of claim 27 wherein said vector comprises DNA encoding a DNA-binding domain of bacterial repressor *LexA*.
37. The nucleic acid of claim 36 wherein said DNA binding domain of bacterial repressor *LexA* is fused to a G1090 promoter.
38. A transgenic plant or transgenic plant cell comprising a vector wherein said vector comprises a chemically inducible promoter.
39. The transgenic plant or transgenic plant cell of claim 38, wherein said transgenic plant is a tobacco plant and said transgenic plant cell is a tobacco plant cell.

40. The transgenic plant or transgenic plant cell of claim 38, wherein said transgenic plant is a lettuce plant and said transgenic plant cell is a lettuce plant cell.
41. The transgenic plant or transgenic plant cell of claim 38, wherein said transgenic plant is an *Arabidopsis* plant and said transgenic plant cell is an *Arabidopsis* plant cell.
42. The transgenic plant or transgenic plant cell of claim 38 wherein said inducible promoter can be induced by a glucocorticoid or an estrogen.
43. The transgenic plant or transgenic plant cell of claim 38 comprising two chemically inducible promoters wherein a first inducible promoter can be induced by a glucocorticoid and a second inducible promoter can be induced by an estrogen.
44. The transgenic plant or transgenic plant cell of claim 38 wherein said vector further comprises a gene selected from the group consisting of *ipt*, *CKII* and a member of the *knotted* family.
45. The transgenic plant or transgenic plant cell of claim 38 wherein said vector further comprises a luciferase gene.
46. A transgenic plant or transgenic plant cell wherein said transgenic plant or said transgenic plant cell is transformed with the vector of claim 22.
47. A method for making a transgenic plant display a fluorescent design, a word or words wherein said method comprises the steps of:
- a) preparing a transgenic plant which comprises a luciferase gene under the control of a chemically inducible promoter; and
 - b) placing a chemical which induces said chemically inducible promoter onto said transgenic plant in the pattern of the design, word or words which are desired;
- whereby said plant will produce luciferase and will fluoresce in the pattern in which the chemically inducible promoter was placed onto said transgenic plant.

48. The method of claim 47 wherein said promoter is under the control of a glucocorticoid or an estrogen.
49. A transgenic plant comprising an antibiotic resistance gene wherein said antibiotic resistance gene is under the control of an inducible promoter.
50. The transgenic plant of claim 49, wherein the transgenic plant is a tobacco plant.
51. The transgenic plant of claim 49, wherein the transgenic plant is a lettuce plant.
52. The transgenic plant of claim 49, wherein the transgenic plant is an *Arabidopsis* plant.
53. The transgenic plant of claim 49, wherein said inducible promoter comprises DNA encoding a regulatory domain of a glucocorticoid receptor or an estrogen receptor.
54. The transgenic plant of claim 53 wherein said inducible promoter is inducible by an inducer selected from the group consisting of dexamethasone, triamcinolone acetonide, betamethasone, hydrocortisone, 17- β -estradiol and 4-hydroxyl tamoxifen.
55. A method for selecting transgenic plants wherein said method comprises growing a transgenic plant of claim 49 in the presence of an antibiotic, wherein said antibiotic is one to which resistance is conferred by said antibiotic resistance gene, and in the presence of an inducer of said inducible promoter.
56. A method for selecting transgenic plants wherein said method comprises growing a transgenic plant of claim 53 in the presence of an antibiotic, wherein said antibiotic is one to which resistance is conferred by said antibiotic resistance gene, and in the presence of an inducer of said inducible promoter.
57. A method for selecting transgenic plants wherein said method comprises growing a transgenic plant of claim 54 in the presence of an antibiotic, wherein said antibiotic is one

to which resistance is conferred by said antibiotic resistance gene, and in the presence of a glucocorticoid selected from the group consisting of dexamethasone, triamcinolone acetonide, betamethasone and hydrocortisone.

58. A transgenic plant comprising a herbicide resistance gene wherein said herbicide resistance gene is under the control of an inducible promoter.
59. The transgenic plant of claim 58, wherein the transgenic plant is a tobacco plant.
60. The transgenic plant of claim 58, wherein the transgenic plant is a lettuce plant.
61. The transgenic plant of claim 58, wherein the transgenic plant is an *Arabidopsis* plant.
62. The transgenic plant of claim 58, wherein said inducible promoter comprises DNA encoding a regulatory domain of a glucocorticoid receptor or an estrogen receptor.
63. The transgenic plant of claim 62 wherein said inducible promoter is inducible by an inducer selected from the group consisting of dexamethasone, triamcinolone acetonide, betamethasone, hydrocortisone, 17- β -estradiol and 4-hydroxyl tamoxifen.
64. A method for selecting transgenic plants wherein said method comprises growing a transgenic plant of claim 58 in the presence of a herbicide, wherein said herbicide is one to which resistance is conferred by said herbicide resistance gene, and in the presence of an inducer of said inducible promoter.
65. A method for selecting transgenic plants wherein said method comprises growing a transgenic plant of claim 62 in the presence of a herbicide, wherein said herbicide is one to which resistance is conferred by said herbicide resistance gene, and in the presence of an inducer of said inducible promoter.

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